THE FINANCIAL COST OF WATER RESOURCES DEVELOPMENT: AN OVERVIEW

As of 1955

In the mid-1950s, the Hoover Commission attempted to evaluate the role and impact of the federal government in the development of U.S. water resources. For two years, the task force reviewed data and held public hearings around the country. In 1955, it presented its report offering an overview of federal participation in the development of water resources.

The task force estimated that for the period 1824-1954 the total investment in water resources in this country amounted to about $85 billion. No attempt was made to convert historical expenditures into 1955 dollars. Of the total amount, the federal government contributed approximately $14.3 billion (17 percent). Nonfederal interests, including private investors and local and state governments and instrumentalities, accounted for the rest. About 80 percent of the $14.3 billion had been invested in capital outlay. The rest had been used for planning, maintenance, and operation. Most of the federal expenditures for water resources development came after 1930. The task force's breakdown follows:

1824-1920	$ 1.15 billion (8% of total)
1920-1930	.86 billion (6%)
1930-1945	2.58 billion (18%)
1945-1954	9.73 billion (68%)
	$14.32 billion (100%)

Historically, navigation and flood control projects account for the bulk of federal water resources investment. Irrigation and hydropower development remained, as of 1955, still largely in the hands of private, local, or state entities; but federal investment and involvement in these areas were growing. In 1933, federally installed hydropower capacity was less than 1 percent of the total. Twenty years later, in 1953, the figure had climbed to 12.4 percent, accounting for a little over 13 percent of electrical energy produced in the United States. The federal government had become, by 1953, the largest single electrical producer in the country.

According to the Hoover Commission task force, more often than not, where the federal government did invest, it required little or no direct nonfederal contributions (irrigation was a major exception, although even here the amount of local contributions was declining). The federal government had borne almost the entire burden of clearing, channeling, and improving navigation in rivers and harbors. The major contribution of local interests was to provide free of cost to the federal government all necessary land, easements, and rights-of-way. The task force also noted that

nonfederal contributions had financed the larger share of several important navigation projects: the Houston Ship Channel, the Sabine-Neches Canal, the New York State Barge Canal, and several Great Lakes harbors. Altogether, the federal government had spent approximately $4.5 billion to improve, maintain, and operate its navigation system. This system included 286 coastal harbors, 131 Great Lakes harbors and channels, the intracoastal canals, and numerous rivers. As of 1954, 22,500 miles of navigable rivers had actually been improved for navigation. An additional 6,000 miles had been authorized for improvement. The Corps of Engineers was operating and maintaining 312 locks and 219 dams for navigation purposes.

As of 1950, the federal flood control program comprised 996 projects in 46 states (all except Delaware and Maine) and in the District of Columbia, Alaska, and Hawaii. Most of these projects were multipurpose in nature. They ranged from small levee projects for local protection to the Mississippi River and Tributaries project to control flooding in the lower Mississippi basin. According to Corps figures, the federal government had spent about $3.7 billion for flood control by 1950. Of this amount, $3.2 billion had been spent on construction, $212.5 million on maintenance and operation, and $189.7 million on flood fighting, repair of damaged works, surveys, and contingencies. Local interests had spent about $52.6 million through fiscal year 1950 on operation and maintenance of flood control projects. The Corps estimated that local contributions would total nearly $480 million before the authorized flood control program was completed.

Most federally sponsored flood control projects required little investment from nonfederal sources, although local flood control projects generally required cost-sharing. The major nonfederal requirement for flood control projects remained the 1936 flood control act "a, b, c" requirements. Local investment in flood control projects averaged about 20 percent through the mid-1950s. If one totaled the nonfederal investment in both large and local-protection flood control projects, he would find the average nonfederal investment to be about 7.4 percent. If anything, the amount of nonfederal investment declined during the post-World War II period.

As of 1973

In its 1973 report to the President, the National Water Commission attempted to calculate the total historical expenditures for water resources development. It converted all figures to the 1972 dollar value. It estimated the total federal financial investment through 1969 for hydropower, flood control, navigation, and recreation to be approximately $52.5 billion. State and local investment amounted to $8.7 billion, while private investment totaled $10.8 billion. (According to the Corps, total federal expenditures for navigation improvements from the early 19th century

to 1975 amounted to more than $13 billion.) The National Water Commission pointed out that state and local interests have spent far more money than the federal government on municipal water and sewage facilities. Total state and local investment in these water projects amounted to about $180 billion. The commission concluded that the federal government had spent a total of $87.7 billion on water projects, whereas state and local interests had invested $194.5 billion, and private interests had spent $56.5 billion. The grand total for water resources investment through 1972 (in 1972 dollars) was about $340 billion.